

NEW COUNTY RECORDS OF HETEROPTERA (HEMIPTERA) FROM GLOUCESTERSHIRE

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ABSTRACT

Eighteen species of terrestrial Heteroptera have been added to the Gloucestershire (vice-counties 33 and 34) county list over the last ten years. These have arisen from each of the main biogeographical regions of the county, and are largely from semi-natural vegetation. This suggests that the additions largely represent under-recording rather than recent colonisation.

INTRODUCTION

The Gloucestershire county Heteroptera fauna has been fully reviewed (Alexander, 1995 & 1996) and recording has subsequently aimed to consolidate coverage of the whole land area of the county and to confirm the continued presence of species which have not been noted for many years. One of the consequences of this new recording effort has been the discovery of a number of previously overlooked species as well as some which may be new arrivals. The two categories are often difficult to discern, however, as many bugs appear to be highly mobile and there are a large number which appear to be expanding their UK ranges northwards and westwards. The assumption is made that species which are strongly associated with long-established semi-natural vegetation are likely to be overlooked long-term residents. The eighteen additions bring the county total of terrestrial Heteroptera to 318 species, an increase of 6% in ten years.

HEATHLAND FAUNA

A good case is presented by the county's heathland fauna. Heathland was once very widespread in the Forest of Dean but has become very fragmented and localised through plantation forestry. Only recently has Forest Enterprise initiated some heathland conservation projects.

The absence of the most widespread heathland specialists from the county list was one of the most noticeable gaps, and investigation rapidly demonstrated their presence. The seed bug *Scolopostethus decoratus* (Hahn) (Lygaeidae) and the plant bug *Orthotylus ericetorum* (Fallen) (Miridae) were found at: Merring Meend Reserve, Plumhill (VC 34; SO61), 15.ix.1990; Wigpool Common (VC34; SO61), 10.viii.1996; and Poor's Allotment (VC34; ST59), 15.viii.1993; as well as other sites subsequently, and are clearly ubiquitous in the heathland fragments. The predatory shieldbug *Rhacognathus punctatus* (L.) appears to be much more localised and may need larger areas of habitat. Nymphs were present amongst heather foliage at Crabtree Hill (VC34; SO61) – a major Forest Enterprise heathland restoration area – 10.viii.2002, and two adults were also found amongst the dense mosses beneath the heather canopy. Interestingly, only *O. ericetorum* has been found on the limestone heaths of the Cotswold Hills: Cleeve Cloud (VC33; SO92), common on heather, 5.ix.1991.

SEVERN FLOODPLAIN

The other major part of the county which appears to have been neglected by past recorders is the wide floodplain of the River Severn, with its expanses of modern intensively managed farmland and expanding urban and industrial developments. There are still fragments of the floodplain marshes however and these still support a few relict species.

The most interesting find has been the shore bug *Salda littoralis* (L.) (Saldidae). This is mainly a northern species in Britain, but also occurs in a few southern coastal counties. The northern habitat is typically river and lake margins where the marginal area is silty and there is vegetation close by, but in the south it is found in brackish habitats (Southwood & Leston, 1959). Its discovery in the old grazing marsh reserve of Ashleworth Ham (VC34; SO82), 4.viii.2002, with its relict brackish water plant species, is a significant addition to the county list. Although the area still floods during the winter months the brackish nature of the water must be fairly negligible.

Other wetland species have also been found along the floodplain. The debris living predatory plant bug *Fieberocapsus flaveolus* (Reuter) has been found in small numbers by beating collapsed *Glyceria* stems over a net at Long Pool, Deerhurst (VC33; SO82), 3.ix.2000 – this area is part of a larger scheme by the Gloucestershire Wildlife Trust (GWT) to recreate areas of the former Severn marshes by returning areas currently under intensive agricultural exploitation to poorly-drained grazing land which is subject to natural flooding from the adjacent river.

The saltmarsh plant bug *Orthotylus moncreaffi* (Douglas & Scott) has also drawn attention to the county's small areas of saltmarsh developed around the mouth of the Severn: Beachley Point (VC34; ST59), 14.vii.1990. *Trigonotylus caelestialium* (Kirkaldy) is the most recent addition to the county list, having been swept from tall saltmarsh grassland along the estuary at Whitescourt, Awre (VC34; SO70), 11.viii.2004.

The floodplain also appears to be an important area for tree canopy bugs. Ashleworth Ham is again the only county site for one of these species, the aphid-feeding plant bug *Pilophorus clavatus* (L.), associated principally with the broad-leaved willows *Salix cinerea* and *S. capraea* (Southwood & Leston, 1959), although beaten from hawthorn here, 4.viii.2002. The similar *P. perplexus* Douglas & Scott has also been added to the county list recently, and is proving to be scattered along the margins of the floodplain. It is another ant mimic, and similarly feeds on aphids and other soft-bodied invertebrates living amongst the foliage of oaks and other trees and shrubs. It was first discovered in the county at Forthampton Oaks (VC34; SO83), with brown tree ant *Lasius brunneus* on the foliage of this large concentration of ancient oaks, 14.viii.1999. It has subsequently been found on the foliage of an ancient oak pollard at Newnham (VC34; SO61), 5.viii.2004, and from pear foliage in an old orchard at Malswick, Newent (VC34; SO72), 5.viii.2004. These are all sites with brown tree ant and its distribution pattern in the county closely fits the distribution of this ant.

The widespread southern flower bug *Orius laticollis* (Reut.) (Anthocoridae) was also discovered at Ashleworth Ham, 4.viii.2002, and is mostly associated with larger trees of poplar, willow and ash. It has also turned up at Debdene (VC33; SP12) in the Cotswolds, 17.vi.2000, and so appears not to be a floodplain speciality in the county.

The grass bug *Miridius quadrivirgatus* (Costa) (Miridae) was said to be mainly associated with wall barley where it grows in rough pastures near the sea (Southwood & Leston, 1959) but it has since then spread well inland and northwards

(B.S. Nau, pers.comm.). A single specimen was swept from the old grassland of Shuthonger Common (VC33; SO83), 14.viii.1999. It has subsequently been swept from ditch-side rough grassland at Sherborne Farm water meadows (VC33; SP11) in the Windrush Valley of the Cotswold Hills by John Widgery, 24.viii.2000.

LIMESTONE GRASSLANDS

The third major geographical feature of Gloucestershire is the Cotswold Hills, with their large expanses of unimproved limestone pastures, large areas of enclosed ancient woodland, and a landscape of large old open-grown native trees. Although this area is probably the most favoured by recorders it has still generated the largest number of additional species, suggesting that the whole county remains under-recorded for Heteroptera.

The most significant find has probably been the seed bug *Megalonotus antennatus* (Schilling). It is not particularly associated with limestone grasslands (Kirby, 1992) but has only been found so far on one of the highest quality examples, Swifts Hill (VC33; SO80), a GWT reserve. One was found in a disused quarry there, another on the south-facing hillside, 19.vi.2003. A single specimen of another seed bug *Peritrechus nubilis* (Fallén) was found in Three Grove's Wood GWT Reserve, Oakridge (VC33; SO90), 13.xi.2003, but this normally open country species is presumed to be an overwintering individual here from the neighbouring limestone pasture of Strawberry Banks GWT Reserve.

The stilt bug *Berytinus crassipes* (Herrich-Schaeffer) (Berytinidae) has a mainly eastern distribution in England, where it favours sparse but grassy wastes, especially old mineral workings, cinder railway embankments, feeding on mouse-ear chickweeds and other plants (Southwood & Leston, 1959). One was swept in an area of old quarry workings at Kilkenny Viewpoint (VC33; SP01), 8.vi.2002, and another was found on the old clinker bed of Chedworth Railway GWT Reserve (VC33; SP01), 23.vii.2003.

The Cotswold grasslands also include areas of unimproved neutral grassland and the knapweed associated plant bug *Oncotylus viridiflavus* (Goeze) (Miridae) was found at Box Farm Meadows (VC34; SO80), 23.vii.2003. Gloucestershire is close to the northern edge of its British range (Southwood & Leston, 1959).

The final open country species added to the county list from the Cotswolds is the lace bug *Agramma laeta* (Fallen) (Tingidae). It is thought to be associated with sedges, woodrushes and rushes, and occurs on saltmarshes, limestone grasslands, in damp woodland, and elsewhere. It is a typical inhabitant of old limestone grasslands and has been found widely on the old commons around Stroud (SO80): Minchinhampton Common, 3.vi.1985; Littleworth Common, 25.iii.1988; Selsley Common, 10.viii.1997 (all VC 34), and Swifts Hill, 18.vi.2003. Andy Foster (pers. comm.) has also taken it on Haresfield Beacon (VC33), 28.vii.1998. One further site has also been found on the edge of the Forest of Dean in the old limestone quarry Stenders Quarry (VC34; SO61), 5.viii.2003.

Two further additions come from tree and woodland sites on the Cotswolds. A specimen of the nationally scarce plant bug *Psallus albicinctus* (Kirschbaum) was swept from grassland downwind of old boundary oaks near Old Hinchwick (VC33; SP12) on a very windy day, 17.vi.2000. It has a south-eastern distribution in England, from Dorset to Northamptonshire, and is associated with mature oaks in open-structured woodland or wood-pasture trees, possibly specialising in high canopy (Kirby, 1992).

Another plant bug, *Mecomma dispar* (Boheman) is also a surprising addition to the list. Although a boreo-montane species, this bug has an odd distribution in Britain involving the north and west—as might be expected—but also Surrey, East Anglia and a few Midland counties, but is rare in the South West (Southwood & Leston, 1959). Its habitat associations are also diverse, including rank vegetation, on marshes, on sand dunes, and also in short turf on sea cliffs. One was swept along a wide grassy ride in Siccaridge Wood (VC33; SO90), 11.vi.2003.

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SHORT COMMUNICATIONS

***Schreckensteinia festaliella* (Hübner) (Lepidoptera: Schreckensteiniidae) on an unusual food-plant in the Outer Hebrides.** – On 30.vii.2005 in the gorge-woodland near the mouth of Allt Volagir (O.S. Grid NF7929), on South Uist (VC110), many of the hazel trees (*Corylus avellana*) had marked “browning” of the leaves. Closer inspection revealed that this browning took the form of many small elongate areas of windowing, due to larval feeding removing portions of the upper epidermis parallel to the larger veins. Careful searching soon revealed the characteristic green larva of *Schreckensteinia festaliella* feeding exposed on the upper surface of the leaf. These larvae subsequently formed the typical spindle-shaped network cocoons of *S. festaliella*.

In my experience in Scotland, *S. festaliella* larvae normally feed on raspberry, *Rubus idaeus*, and less frequently on bramble, *R. fruticosus* agg. and stone bramble, *R. saxatilis*. On South Uist, the brambles under and near the infested hazel trees had signs of *S. festaliella* larval feeding, but to a far lesser extent than the hazel bushes. This report appears to be the first record of *S. festaliella* from the Outer Hebrides (VC110) and the first report of hazel as a food-plant for this species. – K. P. BLAND, National Museums of Scotland, The Granton Centre, 242 West Granton Road, Edinburgh, EH5 1JA.